

REMARKS

In the Office Action, dated September 24, 2002, the Examiner states that Claims 1-20 are pending, Claims 1-20 are rejected, and Claim 21 is withdrawn from consideration. By the present Amendment, Applicant amends the claims.

In the Office Action, the Patent Office rejects Claim 1 under 35 USC §112, second paragraph, as being indefinite as to the phrase "underlies entirely that respective part of a person adjacent to the seat and backrest", since a person cannot be claimed and people vary in shape and size. Applicant respectfully disagrees with this rejection in view of the amended Claim 1.

Claim 1 is amended to replace a "person" with a "user" and to state that the bladder is "adapted to" underlie the user. The rejected phrase was originally added to distinguish the present invention from that arrangement shown in Kobayashi (US 4,615,563). However, the Applicant disagrees that this phrase claims a user (person). The phrase is directed to and characterizes the bladder by reference to its location with respect to a user. Furthermore, notwithstanding that a user may vary in shape and size, the bladders as claimed in the present invention do underlie entirely that respective part of a user adjacent to the seat and backrest when the user occupies the chair.

In the Office Action, the Patent Office rejects Claims 1-8, 10, 13, 19 and 20 under 35 USC §102(b) as being anticipated by Whiteside (US 3,330,598). The Patent Office also rejects Claims 9, 11, 12 and 14-18 under 35 USC §103(a) as unpatentable over Whiteside in view of Brotherston (US 5,868,461). Applicant respectfully disagrees with these rejections.

US 3,330,598 does not explicitly or implicitly disclose the feature that each bladder is charged with air prior to use such that when used the amount is not greater than 60% of the maximum contained volume of the bladder. As set out in the introduction of the present application, blow up air beds, inflatable cushions and neck supports are well known, and such inflatable beds and cushions are normally used in a fully inflated or near fully inflated state, that is they are filled with air to a level at which they are elastically stressed, or to an extent approaching that level. This is

clearly the case in the air filled bladders of US 3,330,598. It is clearly described throughout this document, and particularly in column 2, lines 22 to 35 (with reference to Figures 2 to 5), that the support provided by each cushion is varied by variation of the pressure of the air inside the cushions. This can only be achieved if the cushions are filled with air to a level at which elastic stress occurs. According to the present invention, the bladders are filled to a maximum of 60% of their volume prior to use. The weight of the user displaces the air to suit their shape and in use there is no internally applied pressure in any of the compartments. Thus the chair of the present invention provides support while conforming to the shape of the occupant and is particularly suited to use by immobile persons. It is to be noted that, as set out on page 3, lines 23 to 26 of the present application, the expression "maximum contained volume" is to be understood as meaning the maximum volume to which the bladder may be inflated without experiencing elastic stress.

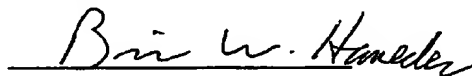
Since none of the prior art teaches or discloses the feature that each bladder is charged with air prior to use such that when used the amount is not greater than 60% of the maximum contained volume of the bladder, these rejections are considered overcome.

In light of the foregoing response, all the outstanding objections and rejections have been overcome. Applicant respectfully submits that this application should now be in better condition for allowance and respectfully requests favorable consideration.

Respectfully submitted,

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Date



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Peter Alan SMITH)
SERIAL NO: 09/622,249) Group Art Unit: 3635
FILED: August 15, 2000) Examiner: D. Dorsey
TITLE: CHAIR INCORPORATING AIR CUSHIONS

THE ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

MARKED VERSION OF CLAIMS

1. A chair of a type having a seat portion and a backrest portion, the chair comprising a seat support structure, a backrest support structure, at least one air-containing cushion positioned on the seat support structure, at least one air-containing cushion secured to the backrest support structure, a layer of compressible material overlaying the cushions, and an upholstery material covering the layer of compressible material; each cushion comprising a bladder which is formed from a pliable, gas impermeable material and each bladder being charged with air prior to use such that when used the amount is not greater than 60% of the maximum contained volume of the bladder whereby the air may freely be displaced only within the bladder in use, and wherein each bladder **is adapted to** underlie[s] entirely that respective part of a [person] **user** adjacent to the seat and backrest when occupying the chair, as a consequence of which shaping may be imparted to the cushion to complement the [person's] shape **of the user**.
2. The chair as claimed in claim 1 wherein each bladder is charged with air prior to use such that when used the amount is not greater than 50% of the maximum contained volume of the bladder.
3. The chair as claimed in claim 1 wherein each bladder is charged with air prior to use such that when used the amount is between 15% and 30% of the maximum contained volume of the bladder.
4. The chair as claimed in claim 1 wherein respective ones of the bladders are charged with air prior to use to different levels falling within the range 15% to 60% of the maximum contained volume of the respective bladders.

5. The chair as claimed in any one of claims 1 to 4 wherein each bladder is provided with a valve through which air is admitted to the bladder prior to use.
6. The chair as claimed in any one of claims 1 to 4 wherein each bladder has a front wall, a back wall and peripheral side walls whereby the bladder would assume a generally oblong shape if it were charged with air in an amount equal to the maximum contained volume of the bladder.
7. The chair as claimed in any one of claims 1 to 4 wherein the compressible material that overlays the cushions comprises an expanded foam plastics material sheet.
8. The chair as claimed in any one of claims 1 to 4 wherein two of the air-containing cushions are secured to the backrest support structure, one above the other.
9. The chair as claimed in claim 8 wherein an upper one of the backrest support structure cushions overlaps the lower one of the backrest support cushions, and wherein the lower one of the backrest support cushions overlaps the cushion that is positioned on the seat support structure.
10. The chair as claimed in claim 9 wherein the upper one of the backrest support cushions extends over and around an upper edge of the backrest portion of the chair.
11. The chair as claimed in any one of claims 1 to 4 wherein an underlay which is formed from an expanded foam sheet material is located below the air-containing cushions.
12. The chair as claimed in claim 11 wherein the underlay is formed from a material that has a higher density than that of the compressible material that overlays the cushions.
13. The chair as claimed in any one of claims 1 to 4 wherein the upholstery material is composed of a semi-permeable or vapour-permeable plastics sheet material.
14. The chair as claimed in any one of claims 1 to 4 wherein the backrest support structure is pivotably mounted with respect to the seat support structure.
15. The chair as claimed in any one of claims 1 to 4 wherein the seat support structure is mounted to a support base which is carried by wheels.
16. The chair as claimed in claim 15 wherein the seat support structure is pivotably mounted with respect to the support base.

17. The chair as claimed in any one of claims 1 to 4 wherein a leg support portion is pivotably mounted with respect to the seat portion and wherein an air-containing cushion is mounted to the leg support portion and is overlayed by both the compressible material and the upholstery material.

18. The chair as claimed in any one of claims 1 to 4 wherein the seat support structure and the backrest support structure are formed as metal frames and wherein the metal frames carry reinforced plastics sheet material which support, either directly or indirectly, the air-containing cushions.

19. The chair as claimed in any one of claims 1 to 4 wherein the cushions are removably secured to the seat and backrest support structures by way of self-securing fastening materials.

20. The chair as claimed in any one of claims 1 to 4 wherein the upholstery material is secured in place by the use of self-securing fastening materials.